

### Remarks/Arguments

In the Office Action mailed May 7, 2003, the Examiner rejected claims 1-6 and 9 under 35 U.S.C. §102(b) for allegedly being anticipated by U.S. Patent No. 5,710,110 to Cooperman. Claims 1-5 and 8-11 are rejected under 35 U.S.C. §102(e) for allegedly being anticipated by U.S. Patent No. 6,339,048 to Santhanam. Finally, claims 1, and 5-7 stand rejected under 35 U.S.C. §103(a) for allegedly being unpatentable over U.S. Patent No. 6,339,048 to Santhanam.

In response to the rejections applicants provide the following remarks, which are believed to place the present case in condition for allowance. Favorable reconsideration of all the pending claims is respectfully requested.

### I. The Claimed Invention

The claimed invention generally relates to composition comprising a water-in-oil emulsion fluid for use in drilling, completion or workover of a subterranean well.

The emulsion fluid comprises:

- A) a base comprising at least one liquid hydrocarbon;
- B) an aqueous phase; and
- C) an emulsifier comprising at least one **amide** prepared by reacting at least one fatty amine with at least one polycarboxylic acid.

### II. The Rejection of Claims 1-6 and 9 Under 35 U.S.C. §102(b) Over Cooperman.

Cooperman et al. generally discloses drilling fluids that contain at least one reaction product of an **alkoxylated aliphatic amino compound** and an organic **polycarboxylic anhydride or acid**. This leads to the formation of **esters and amine salts** of the type described at column 10, lines 47-55. This statement and conclusion is clearly supported by reference to the specification, including the examples and claims of Cooperman et al.

The examiner is respectfully requested to note two significant differences between what is claimed and the cited art.

First, applicants utilize a **fatty amine** in their reaction while Cooperman et al. utilizes an **"alkoxylated" aliphatic amino compound**. One of ordinary skill in the art surely recognizes the differences between these reactants.

Second, the emulsifier of the present claims is an **amide**. The reaction of Cooperman et al. yields an *ester* or an *amine salt* (see column 10 starting at line 45).

Accordingly, since Cooperman utilizes a different reactant ( an **"alkoxylated" aliphatic amino compound vs. applicants fatty amine having no alkoxylation**) in order to get a different emulsifier (an **ester or amine salt** vs. applicants **amide**), applicants respectfully submit that the present rejection under 35 U.S.C. §102(b) is unsupported and/or improper; reconsideration and withdrawal thereof is respectfully requested.

### **III. The Rejection of Claims 1-5 and 8-11 Under 35 U.S.C. §102(e) to Santhanam.**

Santhanam discloses an oil or invert oil based drilling fluid composition comprising:

- a) an oil or invert oil drilling fluid base formulation containing one or more organoclays; and
- b) one or more rheology additives comprising the condensation reaction product of:
  - i) one or more polycarboxylic acids and
  - ii) a chemical selected from the group consisting of one or more liquid alkoxylated nitrogen containing compounds and polyetherdiamines having 2 or more active hydrogen groups.

The examiner is respectfully requested to note that Santhanam reacts one or more polycarboxylic acids with a liquid, **alkoxylated** nitrogen containing compound and/or a **polyetherdiamine**. Applicants utilize a fatty amine as their reactant...not a polyetherdiamine and not a liquid **alkoxylated** nitrogen containing compound. Additionally, Santhanam's reaction yields an **ester**. In contradistinction, applicants claim an **amide** as their emulsifier. In view of the foregoing, it is respectfully submitted that the rejection of claims 1-5 and 8-11 Under 35 U.S.C. §102(e) is improper; reconsideration and withdrawal thereof is respectfully requested.

#### **IV) The Rejection of Claims 1, and 5-7 Under 35 U.S.C. §103(a) Over Santhanam**

As mentioned above, Santhanam discloses and oil or invert oil based drilling fluid composition that comprises at least one rheology additive that is the condensation reaction product of:

- i) one or more polycarboxylic acids and
- ii) a chemical selected from the group consisting of one or more liquid alkoxylated nitrogen containing compounds and polyetherdiamines having 2 or more active hydrogen groups. This condensation reaction clearly produces an **ester...not an amide** as is required by applicants' claims.

At page 4 of the office action the examiner states that:

Santhanam teaches amines of formula I, wherein x+y is most preferably 2-20 (column 11, lines 1-38) are used to react with the polycarboxylic acid to form the reaction product. It would have been obvious to one of ordinary skill in the art to utilize various compounds of formula I, wherein x+y is 2 given the teaching that Santhanam that such compounds are preferably used to react with the polycarboxylic, to form the reaction product of the invert drilling fluid.

The examiner fails to note, however, that the amines of Santhanam contain at **least one and preferably two hydroxyalkyl or polyoxyalkylene groups** (column 10, lines 65-67). Applicants process utilizes tallow amines as raw materials...these are not the same as the alkoxylated materials of Santhanam! And, it the examiner that

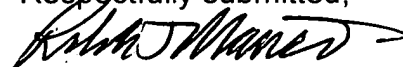
this difference is "not significant", he is respectfully directed to column 11, starting at line 25 of Santhanam where it is acknowledged that the aforementioned oxyalkylene groups provide "important functions" to the invention. So...Santhanam believes that these alkoxyated groups are important to the function of his invention, and to eliminate them would be contrary to the teachings of Santhanam.

Further, as previously mentioned, Santhanam's condensation process produces an ester...not an amide as is required by applicants' claims.

Given these substantial differences applicants respectfully submit that absent hindsight reliance on applicants' disclosure, Santhanam cannot be reasonably interpreted as disclosing or suggesting the claimed invention. The present rejection is therefore believed to be improper; reconsideration and withdrawal thereof is respectfully requested.

In view of the distinguishing remarks presented herein, all of the pending claims are believed to be in condition for allowance, which action is respectfully solicited.

Respectfully submitted,



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